A NEW CALIFORNIAN STENOPOGON

(Diptera, Asilidæ)

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The asilid herein described as new was first brought to the writer's attention by Mr. Mont Cazier who had collected a few specimens about ten miles southeast of Livermore, California. A subsequent trip to the locality revealed that this species was quite abundant, flying rather sluggishly through the tall, dry grass stems, upon which it rested and awaited its prey. The prey, noted in several instances, included leafhoppers, buprestids of the genus *Acmæodera*, and several kinds of small Diptera and Hymenoptera.

The writer is indebted to Mr. Cazier who loaned material for this study, who has been of assistance in drawing up this description, and for whom the new species is gratefully named, to Professor W. B. Herms, Dr. E. G. Linsley, Dr. T. H. G. Aitken and Mr. C. D. Michener who read the manuscript and who offered valuable suggestions for its improvement, and to Dr. S. W. Bromley for verifying the status of this species.

Stenopogon (Stenopogon) cazieri Brookman, new species

This is a medium sized, slender, dark colored species, having a black mystax and a bare postnotum. It is related to *Stenopogon jubatus* Coquillett[1] and *Stenopogon jubatoides* Bromley[2].

Male. *Head* black; face with golden, sericeous pubescence on gibbosity, yellow pollinose from above gibbosity to antennæ; mystax entirely black; antennæ black, thinly pruinose, bristles on first two segments black, third segment one and one-half times as long as first two together, style three-eighths as long as third segment, tapering distally and bearing short, terminal spine; front yellow pollinose with black bristles; ocellar tubercle with tuft of black bristles; palpi and proboscis shining black, palpi with black hairs, proboscis bearing long, slender black and silvery hairs; occipital arch silvery pollinose, dorsally with long, black bristles, ventrally with both black and silver hairs; beard largely of black hairs interspersed with silvery hairs. *Thorax* black, brownish pollinose; prothorax with black bristles and black and silver hairs interspersed; mesonotum bearing black macrochætæ and microchætæ; humeri with slender black bristles and few silvery hairs; postalar calli with strong, black bristles, some silvery hairs dorsally; sternopleuron with a tuft of long, slender, pale hairs; scutellum

[1] Coquillett, D. W., 1904, Invertebrata Pacifica, 1:38.
[2] Bromley, S. W., 1937, Jour. N. Y. Ent. Soc., 45:297.

with stout black marginal bristles; postnotum entirely bare. *Legs*: coxæ black, brownish pollinose, with long black bristles and hairs projecting anteriorly, posterior edge with silvery hairs; femora black, distal tips rufous, bearing black bristles and slender silvery hairs; tibiæ black, proximal three-eighths rufous, all setæ black; tarsomeres rufous with black tips, setæ black. *Wings* fumose; basal area including proximal three-fourths of first basal, all of second basal, anal, and axillary cells, and alula frosted in appearance; costal margin clothed with short black, scale-like hairs. *Abdomen* shining black, tergites edged with dark gray pollen, thickly covered with rather long, slender, silvery-white hairs; lateral eminences of first tergite densely pilose, bearing many slender black, few pale bristles dorsally and strong pale bristles and silvery hairs laterally; sternites gray pollinose on anterior edges and on central, subcircular area at posterior edges; terminalia black; lateral lobes of ninth tergite about as long as greatest height of terminalia, rounded apically, bearing slender black bristles; ninth sternite five-sixths as long as tergite, posterior margin deeply and widely incised, producing U-shaped notch, postero-lateral lobes thus formed slender, projecting laterally, curving dorsally, basal portion with few black bristles tipped with silver, lobes with pale hairs. Total length, 20.5 mm.; abdomen, 14 mm.; wings, 14 mm.

Female. Similar to male but in general with more pale hairs and bristles; wings with less extensive frosted area at base; pile of abdominal tergites shorter, less dense; no pale bristles on lateral edges of first tergite; posterior edge of sixth tergite, all of seventh and eighth tergites with short black hairs; ovipositor with black spines. Total length, 23 mm.; abdomen, 17 mm.; wings, 15 mm.

Holotype, male, No. 5115, and allotype, female, No. 5116, Mus. Calif. Acad. Sci., Ent., collected 10 miles southeast of Livermore, Alameda County, California, May 10, 1940 (M. A. Cazier and A. E. Michelbacher). Paratopotypes: one male, five females, May 2, 1936 (M. A. Cazier); fifteen females, sixteen males, May 10, 1940 (M. A. Cazier and A. E. Michelbacher); thirty-nine females, twenty-seven males, May 12, 1940 (M. A. Cazier, C. D. Michener and B. Brookman). Paratypes: two males, two females, summit Mount Hamilton, Santa Clara County, California, May 19, 1940 (W. C. Reeves and M. A. Cazier). Paratypes have been deposited in the following collections: University of California, Berkeley; California Academy of Sciences; United States National Museum; American Museum of Natural History; S. W. Bromley; M. T. James; M. A. Cazier; T. H. G. Aitken and B. Brookman.

Stenopogon cazieri may be readily separated from *Stenopogon jubatus* Coq. by the predominance of black hairs and

bristles on the occipital arch, the beard and the legs, and by the brown pollinose mesonotum. Males may be separated by the shape of the lateral lobes of the ninth tergite, those of *cazieri* appearing (from lateral view) stout, broadly rounded apically, and not curving ventrad to any extent, while those of *jubatus* are more slender, taper acutely toward the apex and have the apical half curved ventrally. In addition to other characters, the females of *cazieri* retain the basal frosted area of the wing; this area is completely absent in the female specimens of *jubatus* at my disposal.

This species is distinguished from *Stenopogon jubatoides* Brom. by the following characters: the hairs and bristles of the occipital arch, beard and legs are predominantly black, while those of *jubatoides* are white; the third segment of the antennæ is relatively short (from one to one and one-third times the length of the first two segments together) and bears a ventral excision along the apical half, while that of *jubatoides* is relatively long (from one and one-half to two times the length of the first two segments together) and bears a ventral excision along the apical two-thirds or more; the antennal style is relatively long (from one-third to one-half as long as the third segment), while that of *jubatoides* is relatively short (from one-fifth to one-sixth as long as the third segment). In addition the males may be separated by the shape of the posterior notch of the ninth sternite, that of *cazieri* being deeply and widely incised and U-shaped with the inner edges of the postero-lateral lobes subparallel, that of *jubatoides* being shallowly notched and more V-shaped with the inner edges of the postero-lateral lobes widely divergent apically.

In the long series at hand there is a surprisingly small amount of variation in color and structure. This is particularly true of the males. In length the males vary from about 17 mm. to 21 mm. The females, in general, are larger than the males, varying from 18 mm. to 25 mm. in length. The latter have more light colored pile on the head and thorax than the males, a few specimens approaching *Stenopogon jubatoides* in the amount of white pile present. There is a certain amount of variation in the relative proportions of the antennal segments, but in no instance did these proportions approach those found in *Stenopogon jubatoides.* There are at hand four specimens from Sunset Valley, Santa Barbara County, California, which have the wing membrane infuscated only along the veins, but which, in all other respects, appear identical to the Livermore specimens.